

WHAT IS CLAIMED IS:

1. An antibody or fragment thereof that specifically recognizes Fibrinopeptide B (FPB) peptides defined by amino acid sequences SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5 and SEQ ID NO:6, wherein the antibody or fragment thereof has an IC₅₀ for fibrinopeptide B and an IC₅₀ for des-arginine fibrinopeptide B, wherein the IC₅₀ for FPB differs from the IC₅₀ for des-arginine fibrinopeptide B by less than 25%.
2. The antibody or fragment thereof of claim 1, wherein the fragment thereof is an Fab, F(ab)₂, or Fv fragment.
3. The antibody or fragment thereof according to claim 1, wherein the antibody or fragment thereof is attached to a substrate.
4. The antibody or fragment thereof according to claim 3, wherein the substrate is a gel, hydrogel, resin, bead, nitrocellulose, nylon filter, microtiter plate, culture flask, or polymeric material.
5. The antibody or fragment thereof of claim 1, further comprising a detectable moiety.
6. The antibody or fragment thereof of claim 5, wherein the detectable moiety is a radionuclide, enzyme, specific binding pair component, colloidal dye substance, fluorochrome, chemiluminescent substance, electrochemiluminescent substance, electroactive agent, reducing substance, latex, digoxigenin, metal, particulate, dansyl lysine, antibody, protein A, protein G, electron dense material, or chromophore.

7. The antibody or fragment thereof of claim 1, wherein the antibody is a monoclonal antibody.
8. The antibody or fragment thereof of claim 1, wherein the antibody is a polyclonal antibody.
9. A continuous cell line that produces an antibody that specifically recognizes Fibrinopeptide B (FPB) peptides defined by amino acid sequences SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5 and SEQ ID NO:6, wherein the antibody has an IC₅₀ for fibrinopeptide B and an IC₅₀ for des-arginine fibrinopeptide B, wherein the IC₅₀ for FPB differs from the IC₅₀ for des-arginine fibrinopeptide B by less than 25%.
10. The continuous cell line of claim 9, wherein the cell line is a hybridoma cell line.
11. A diagnostic method for detecting thrombotic or thromboembolic disease in a patient comprising:
 - (a) contacting a physiological sample suspected of containing fibrinopeptide B (FPB) peptide and/or des-arginine FPB peptide with an amount of detection agent specific for FPB and des-arginine FPB peptides to form an FPB:detection agent complex, wherein the detection agent has an IC₅₀ for fibrinopeptide B and an IC₅₀ for des-arginine fibrinopeptide B, wherein the IC₅₀ for FPB differs from the IC₅₀ for des-arginine fibrinopeptide B by less than 25%; and
 - (b) detecting a presence or amount of FPB and/or des-arginine FPB peptides present in the sample to determine whether the patient has thrombotic or thromboembolic disease.
12. The diagnostic method of claim 11, further comprising removing fibrinogen from the physiological sample.

13. The diagnostic method of claim 11, wherein the thrombotic or thromboembolic disease is a deep venous thrombosis (DVT) or a pulmonary embolism (PE).
14. The method of claim 11 wherein the physiological sample is a fluid.
15. The method of claim 14 wherein the fluid is blood plasma.
16. The method of claim 15 wherein a concentration of FPB and/or des-arginine FPB peptides in the sample above 5 ng/ml is reported as indicative of thrombotic or thromboembolic disease.
17. The method of claim 15 wherein a concentration of FPB and/or des-arginine FPB peptides in the sample above 10 ng/ml is reported as indicative of thrombotic or thromboembolic disease.
18. The method of claim 14 wherein the fluid is urine.
19. The method of claim 18 wherein a concentration of FPB and/or des-arginine FPB peptides in the sample above 50 ng/ml is reported as indicative of thrombotic or thromboembolic disease.
20. The method of claim 18 wherein a concentration of FPB and/or des-arginine FPB peptides in the sample above 100 ng/ml is reported as indicative of thrombotic or thromboembolic disease.
21. The method of claim 11 wherein the detection agent is an Fab, F(ab)₂, or Fv fragment.

22. The method of claim 11, wherein the detection agent is attached to a substrate.
23. The method of claim 22, wherein the substrate is a gel, hydrogel, resin, bead, nitrocellulose, nylon filter, microtiter plate, culture flask, or polymeric material.
24. The method of claim 11, wherein the detection agent further comprises a detectable moiety.
25. The method of claim 24, wherein the detectable moiety is a radionuclide, enzyme, specific binding pair component, colloidal dye substance, fluorochrome, reducing substance, chemiluminescent substance, electrochemiluminescent substance, electroactive substance, latex, digoxigenin, metal, particulate, dansyl lysine, antibody, protein A, protein G, electron dense material, or chromophore.
26. The method according to claim 11, wherein the detection step (c) is by enzyme-linked immunosorbent assay, immunonephelometry, agglutination, precipitation, immunodiffusion, immunoelectrophoresis, immunofluorescence, electrochemiluminescence, surface plasmon resonance, chemiluminescence, electrochemical immunoassay, radioimmunoassay, or immunohistochemistry.
27. The method of claim 11, wherein the detection agent is a monoclonal antibody.
28. The method of claim 11, wherein the detection agent is a polyclonal antibody.

29. A method for monitoring treatment of thrombotic or thromboembolic disease caused by a thrombosis or embolism in a patient comprising:
- (a) contacting a physiological sample suspected of containing an amount of fibrinopeptide B (FPB) peptide and/or des-arginine FPB peptide with an amount of detection agent specific for FPB and des-arginine FPB peptides to form an FPB:detection agent complex, wherein the detection agent has an IC₅₀ for fibrinopeptide B and an IC₅₀ for des-arginine fibrinopeptide B, wherein the IC₅₀ for FPB differs from the IC₅₀ for des-arginine fibrinopeptide B by less than 25%;
 - (b) detecting the amount of FPB and/or des-arginine FPB in the sample;
 - (c) repeating steps (a) and (b) at a point later in time; and
 - (d) comparing the amounts determined in steps (b) and (c), and correlating the change in the amounts to determine whether the thrombosis or embolism is diminishing in size.
30. The monitoring method of claim 29, further comprising removing fibrinogen from the physiological sample.
31. The method of claim 29, wherein the detection agent is a monoclonal antibody.
32. The method of claim 29, wherein the detection agent is a polyclonal antibody.
33. The method of claim 30, wherein the detection agent is a monoclonal antibody.
34. The method of claim 30, wherein the detection agent is a polyclonal antibody.

35. A kit for detecting thrombotic or thromboembolic disease in a patient, the kit comprising:
- (a) a composition comprising a detection agent specific for Fibrinopeptide B (FPB) peptide, wherein the detection agent is an antibody or fragment thereof that specifically recognizes FPB peptides defined by amino acid sequences SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5 and SEQ ID NO:6 and, wherein, the detection agent has an IC50 for fibrinopeptide B and an IC50 for des-arginine fibrinopeptide B, wherein the IC50 for FPB differs from the IC50 for des-arginine fibrinopeptide B by less than 25%; and
 - (b) packaging materials enclosing the composition.
36. The kit of claim 35, wherein the detection agent is a monoclonal antibody.
37. The kit of claim 35, wherein the detection agent is a polyclonal antibody.
38. A kit for detecting thrombotic or thrombotic or thromboembolic disease in a patient, the kit comprising:
- (a) a composition comprising a detection agent specific for Fibrinopeptide B (FPB) peptides, wherein the detection agent is an antibody or fragment thereof that specifically recognizes the FPB peptides defined by amino acid sequences SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5 or SEQ ID NO:6; and
 - (b) reagents for measuring an indicator of urine volume or rate of glomerular filtration.
39. The kit of claim 38, wherein the detection agent is a monoclonal antibody.
40. The kit of claim 38, wherein the detection agent is a polyclonal antibody.

41. A fibrinopeptide B peptide analog defined by an amino acid sequence comprising SEQ ID NO:1.
42. A des-arginine fibrinopeptide B peptide analog defined by an amino acid sequence comprising SEQ ID NO:2.
43. The peptide of claims 41 or 42 covalently linked to a carrier molecule.
44. The peptide of claim 43, wherein the carrier molecule is keyhole limpet hemocyanin (KLH).
45. The peptide of claims 41 or 42 covalently linked to a protein, detectable label, polymer, bead, electrochemiluminescent label, antigen, biotin, streptavidin metal chelate, colloid, or electrochemical label.
46. An animal that produces a polyclonal antibody or fragment thereof that specifically recognizes a fibrinopeptide B peptide defined by SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5 or SEQ ID NO:6, wherein the antibody or fragment thereof has an IC₅₀ for fibrinopeptide B and an IC₅₀ for des-arginine fibrinopeptide B, wherein the IC₅₀ for fibrinopeptide B differs from the IC₅₀ for des-arginine fibrinopeptide B by less than 25%.
47. The animal of claim 46, wherein the peptide is covalently linked to a carrier molecule.
48. The animal of claim 47, wherein the carrier molecule is keyhole limpet hemocyanin (KLH).